

Community: Hypertension and Special Populations in East Texas

Texas Cardiovascular Disease and Stroke Partnership

Texas Hypertension Conference

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Overview

1. Discuss blood pressure basics
2. Overview prevalence of hypertension with a focus on rural areas
3. Describe a community-based intervention focused on hypertension

1. Discuss Blood Pressure Basics



Hypertension

- Having high blood pressure means the pressure of the blood in your blood vessels is higher than it should be.
- About **1 of 3 U.S. adults**—or about **75 million people**—have high blood pressure
- **Only about half (54%)** of these people have their high blood pressure under control
- This common condition increases the risk for heart disease and stroke, two of the leading causes of death for Americans.

High Blood Pressure

- High blood pressure is called the “silent killer” because it often has no warning signs or symptoms, and many people do not know they have it.
- It is important to check your blood pressure regularly.

High Blood Pressure in the United States

- Only **about half (54%)** of people with high blood pressure have their condition under control.
- High blood pressure was a primary or contributing cause of death for more than **410,000 Americans** in 2014—that's more than **1,100 deaths each day**.
- High blood pressure costs the nation **\$48.6 billion** each year. This total includes the cost of health care services, medications to treat high blood pressure, and missed days of work.

Keeping Your Blood Pressure Levels in a Healthy Range

- Involves
 - **taking medications,**
 - **reducing sodium** in the diet,
 - getting **daily physical activity,** and
 - **quitting smoking**





DID YOU KNOW?



THESE SIX POPULAR FOODS CAN ADD HIGH LEVELS OF SODIUM TO YOUR DIET*

The American Heart Association recommends that you aim to eat less than 1,500 mg of sodium per day.



When you see the Heart-Check mark on a product, you know the food has been certified to meet nutritional criteria for heart-healthy foods, including sodium.



BREADS & ROLLS

Some foods that you eat several times a day, such as bread, add up to a lot of sodium even though each serving may not seem high in sodium. Check the labels to find lower-sodium varieties.

1



COLD CUTS & CURED MEATS

One 2 oz. serving, or 6 thin slices, of deli meat can contain as much as half of your daily recommended dietary sodium. Look for lower-sodium varieties of your favorite lunch meats.

2



SANDWICHES

A sandwich or burger from a fast food restaurant can contain more than 100 percent of your daily suggested dietary sodium. Try half a sandwich with a side salad instead.

3



PIZZA

A slice of pizza with several toppings can contain more than half of your daily recommended dietary sodium. Limit the cheese and add more veggies to your next slice.

4



SOUP

Sodium in one cup of canned soup can range from 100 to as much as 940 milligrams—more than half of your daily recommended intake. Check the labels to find lower sodium varieties.

5



CHICKEN

Sodium levels in poultry can vary based on preparation methods. You will find a wide range of sodium in poultry products, so it is important to choose wisely.

6

*Quader ZS, Zhao L, Gillespie C, et al. Sodium Intake Among Persons Aged ≥2 Years — United States, 2013–2014. MMWR Morb Mortal Wkly Rep 2017;66:324–338. DOI: <http://dx.doi.org/10.15585/mmwr.mm6612a3>.

©2016, American Heart Association 3/17DS11670

Physical Exercise

- 2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity (i.e., brisk walking) every week **and**
- Muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms)

10 minutes at a time is fine

- 150 minutes each week sounds like a lot of time, but it's not.
- You can break it up into smaller chunks of time during the day.
- Works as long as you're doing physical activity at a moderate or vigorous effort for at least 10 minutes at a time.

Effects of High Blood Pressure

- **Decreased Blood Flow to the Heart**
 - High blood pressure can harden your arteries, which decreases the flow of blood and oxygen to your heart and lead to heart disease.

Effects of High Blood Pressure

- **The Brain**

- High blood pressure can burst or block arteries that supply blood and oxygen to the brain, causing a stroke.
- Brain cells die during a stroke because they do not get enough oxygen.
- Stroke can cause serious disabilities in speech, movement, and other basic activities, and a stroke can kill you.

Effects of High Blood Pressure

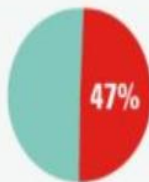
- **The Kidneys**

- Adults with diabetes, high blood pressure, or both have a higher risk of developing chronic kidney disease than those without these diseases.
- Approximately 1 of 3 adults with diabetes and 1 of 5 adults with high blood pressure have chronic kidney disease.

Controlling Blood Pressure

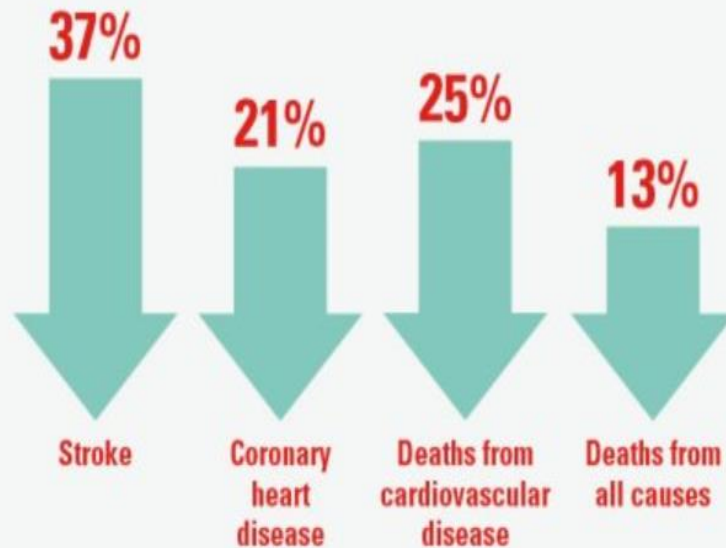
- **Work with Your Health Care Team**
 - Team-based care that includes you, your doctor, and other health care providers can help reduce and control blood pressure.¹
 - If you already have high blood pressure, your doctor may prescribe medications and lifestyle changes.
 - Lifestyle changes are just as important as medications.
 - Follow your doctor's instructions and stay on your medications.
 - Do not stop taking your medications before talking to your doctor or pharmacist.
 - All drugs may have side effects, so talk to your doctor regularly. As your blood pressure improves, your doctor will check it often.

◀ BLOOD PRESSURE CONTROL ▶



ONLY ABOUT HALF
of people with high blood pressure
have their condition under control

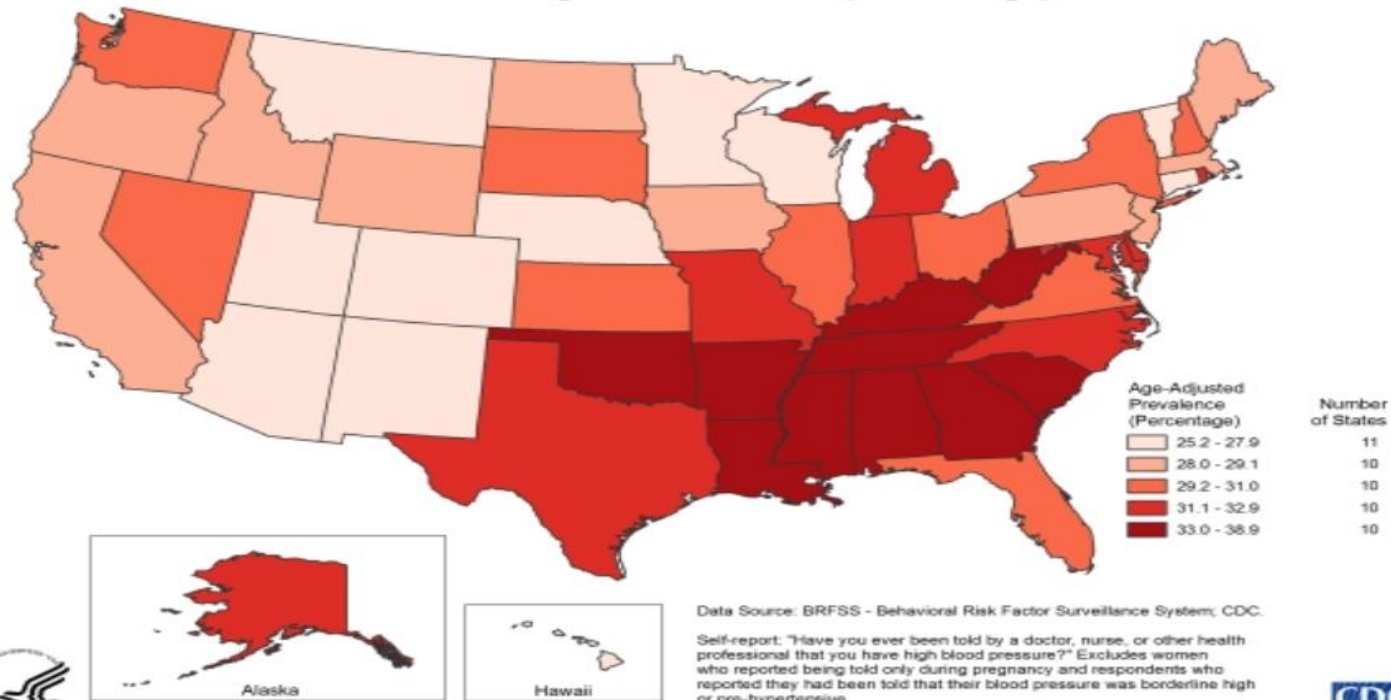
Reducing average population systolic blood pressure by
only 12–13 mmHg could reduce:



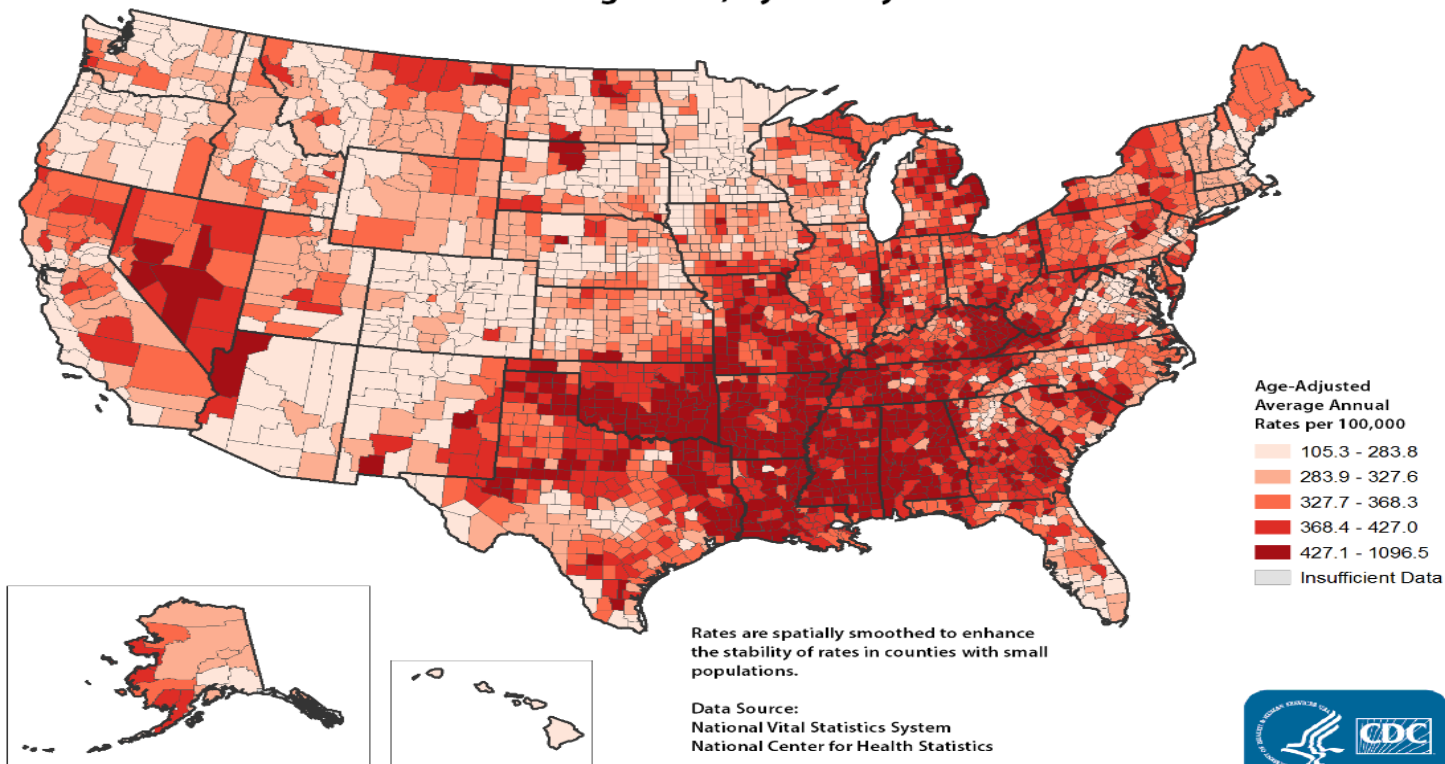
2. Overview Hypertension Prevalence



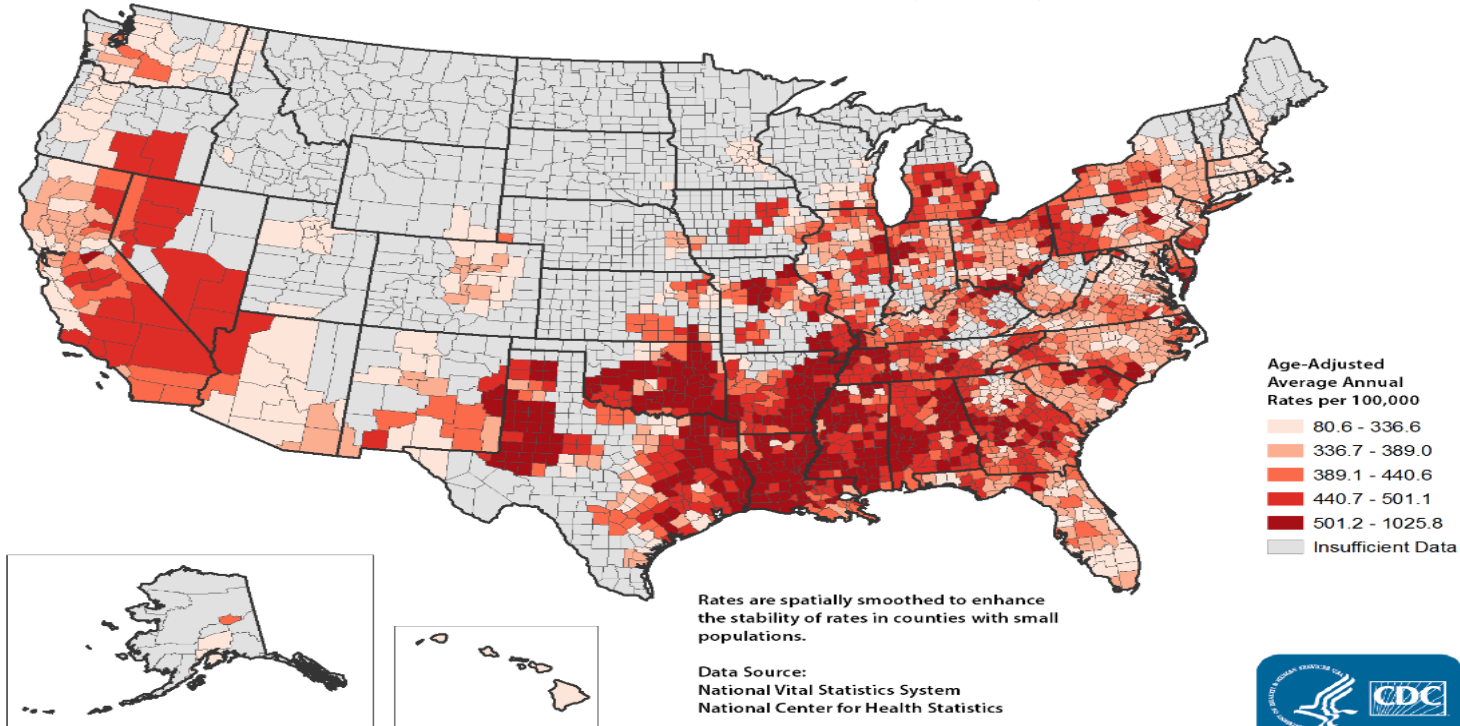
Prevalence of Hypertension, 2011 U.S. Adults Ages 20 and Older (Percentage)



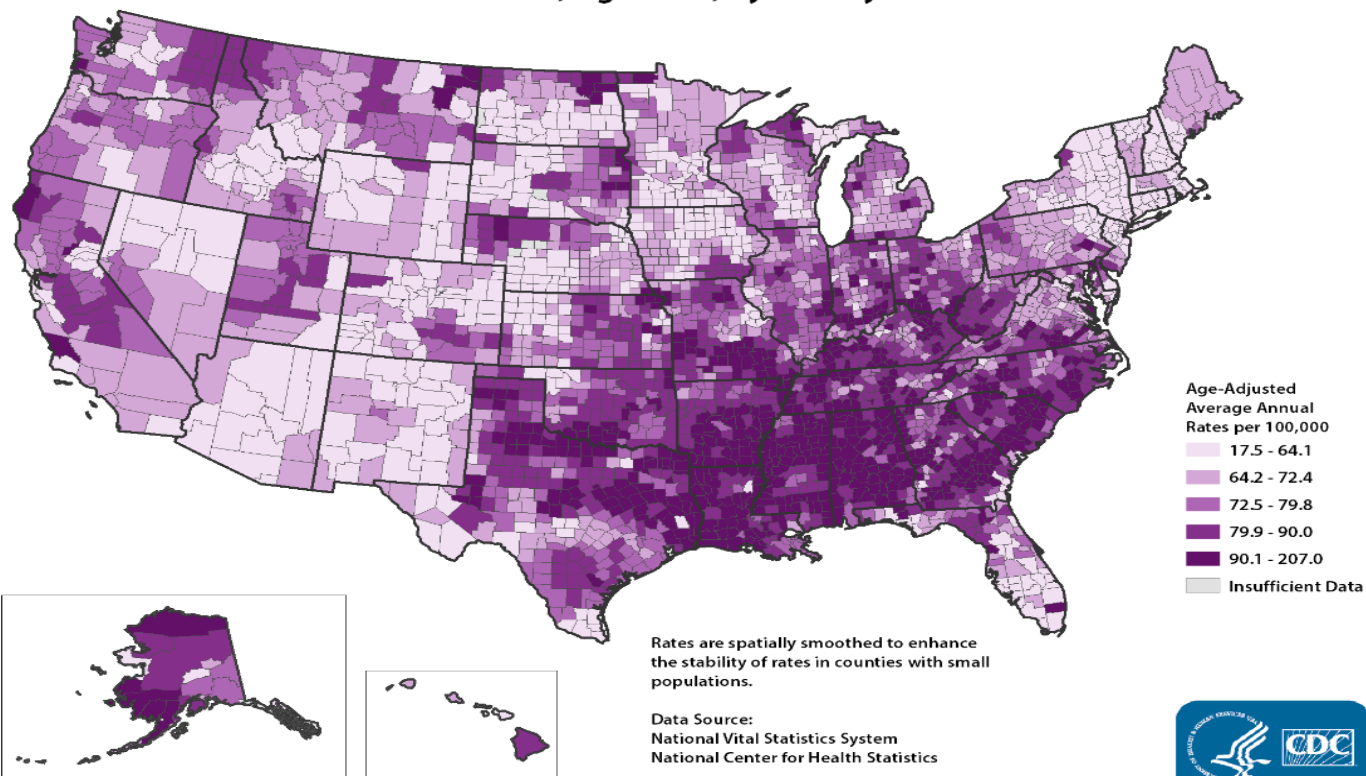
Heart Disease Death Rates, 2013-2015 All Ages 35+, by County



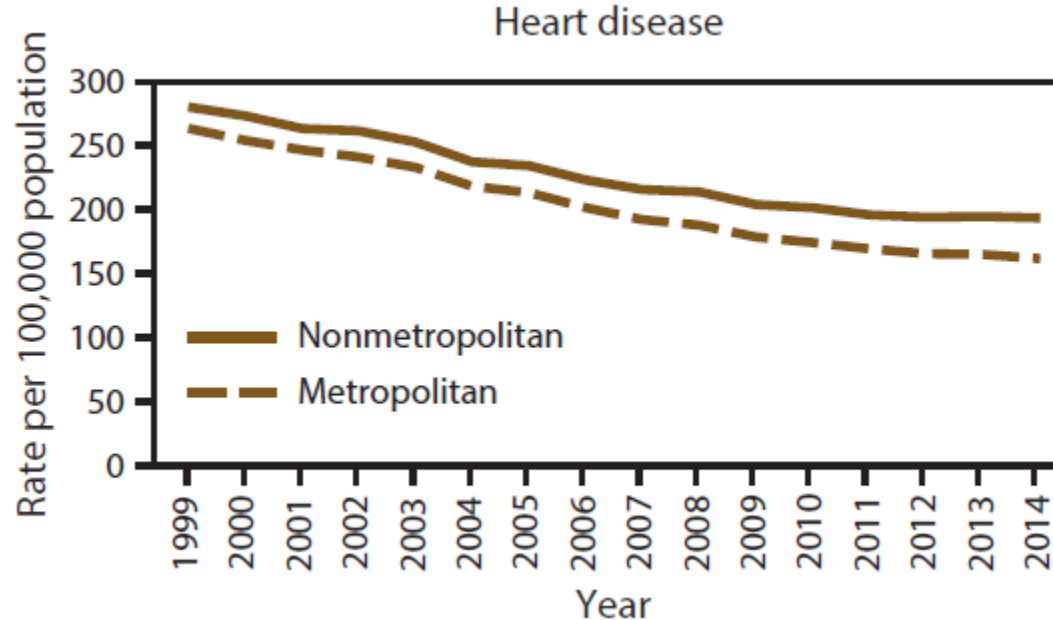
Heart Disease Death Rates, 2013-2015 Black (non-Hispanic), Ages 35+, by County



Stroke Death Rates, 2013 - 2015 Adults, Ages 35+, by County



Age-adjusted death rates among persons of all ages for heart disease in nonmetropolitan and metropolitan areas,* by year — National Vital Statistics System, United States, 1999–2014



Age-adjusted death rates among persons of all ages for heart disease in nonmetropolitan and metropolitan areas,* by year — National Vital Statistics System, United States, 1999–2014

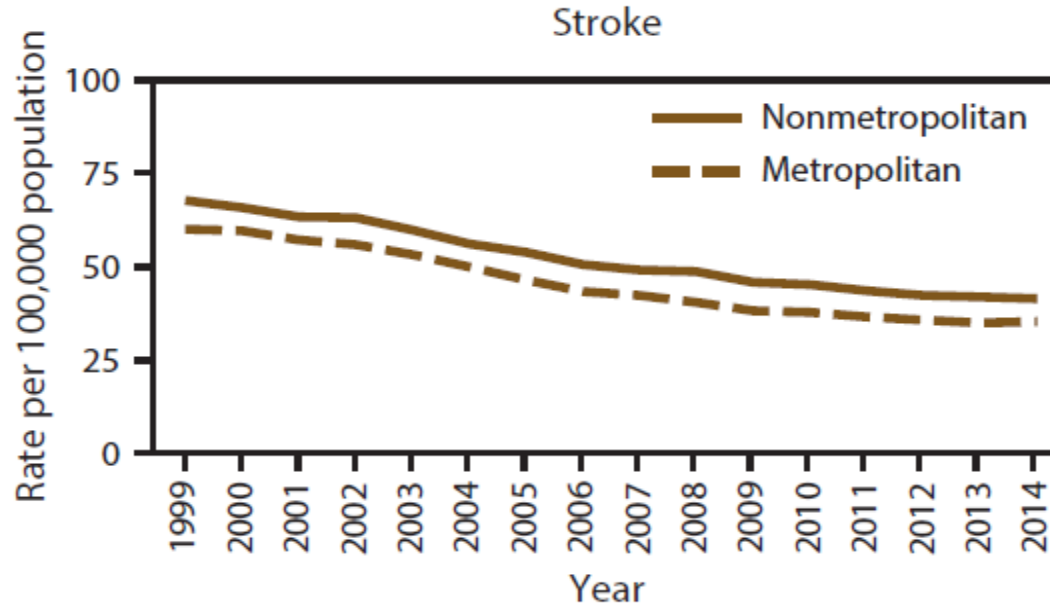
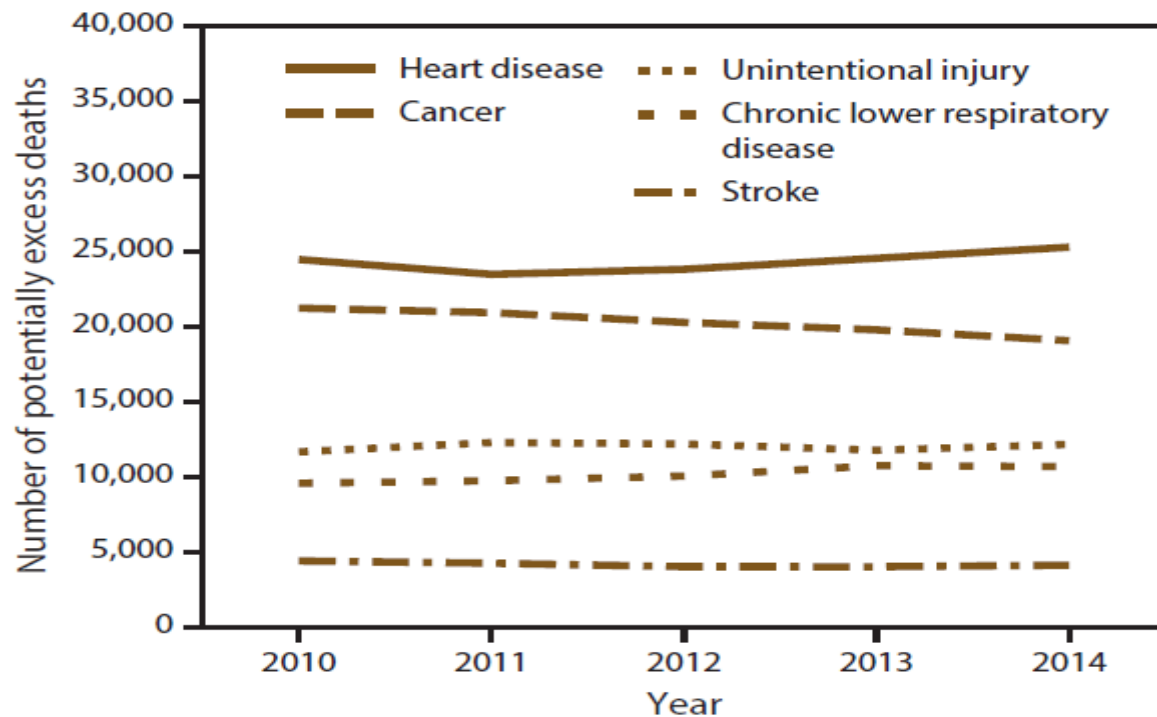


FIGURE 3. Number of potentially excess deaths* among persons aged <80 years for five leading causes of death in nonmetropolitan areas,[†] by year — National Vital Statistics System, United States, 2010–2014



Rural Americans at higher risk of death from five leading causes (MMWR January 13, 2017)

- In 2014, many deaths among rural Americans were potentially preventable
 - 25,000 from heart disease
 - 19,000 from cancer
 - 12,000 from unintentional injuries
 - 11,000 from chronic lower respiratory disease, and
 - 4,000 from stroke

FIGURE 4. Percentage of potentially excess deaths* among persons aged <80 years for five leading causes of death in nonmetropolitan and metropolitan areas[†] — National Vital Statistics System, United States, 2014

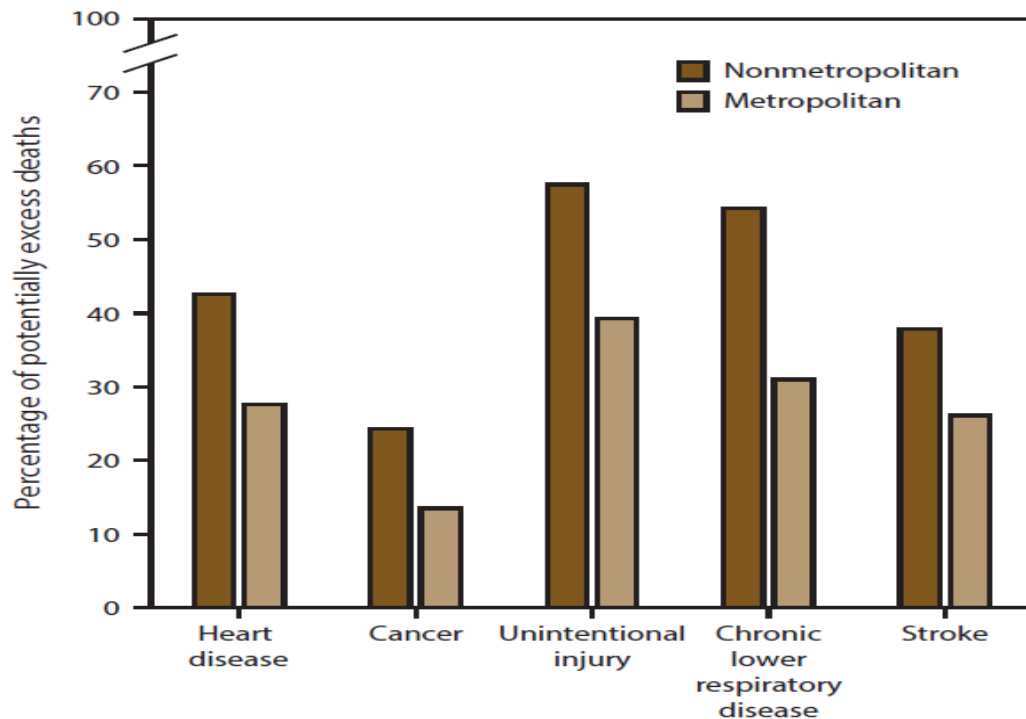
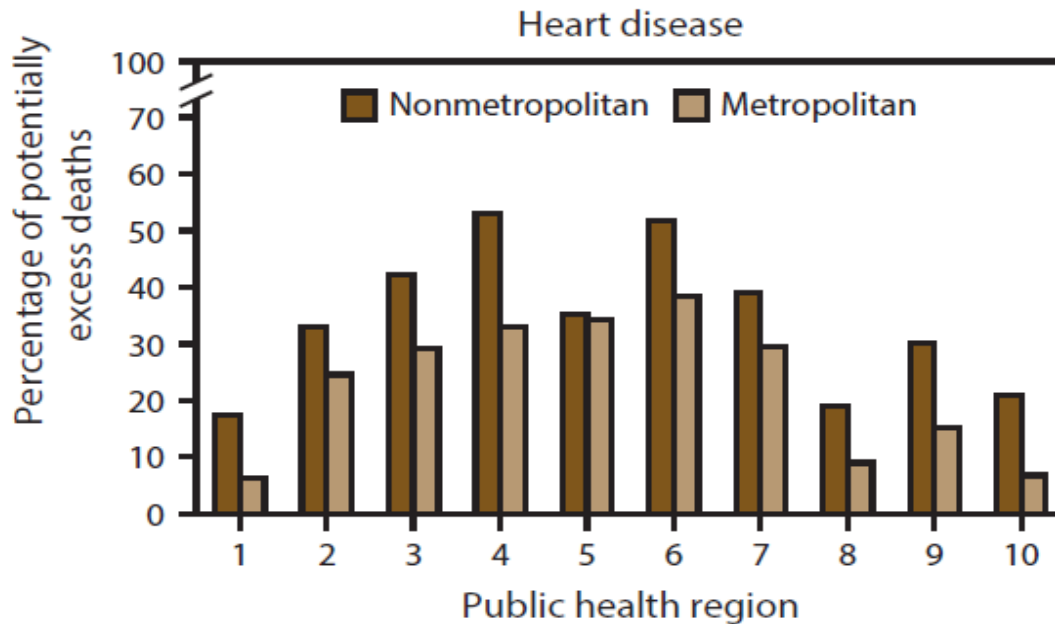


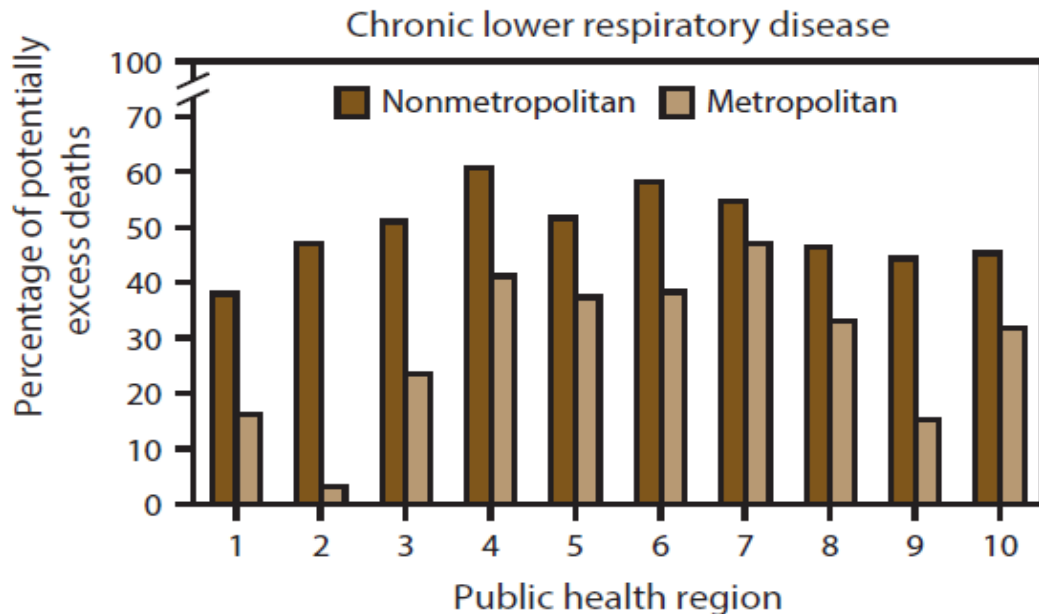
FIGURE 1. U.S. Department of Health and Human Services public health regions*



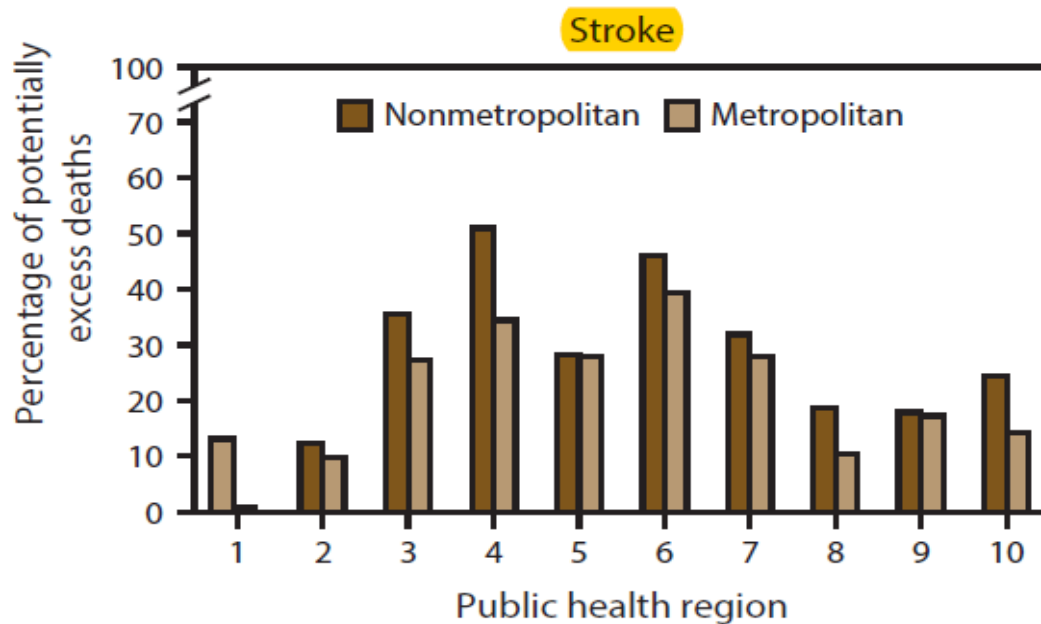
Percentage of potentially excess deaths* among persons aged <80 years for five leading causes of death in nonmetropolitan and metropolitan areas,† by year and public health region§ — National Vital Statistics System, United States, 2014



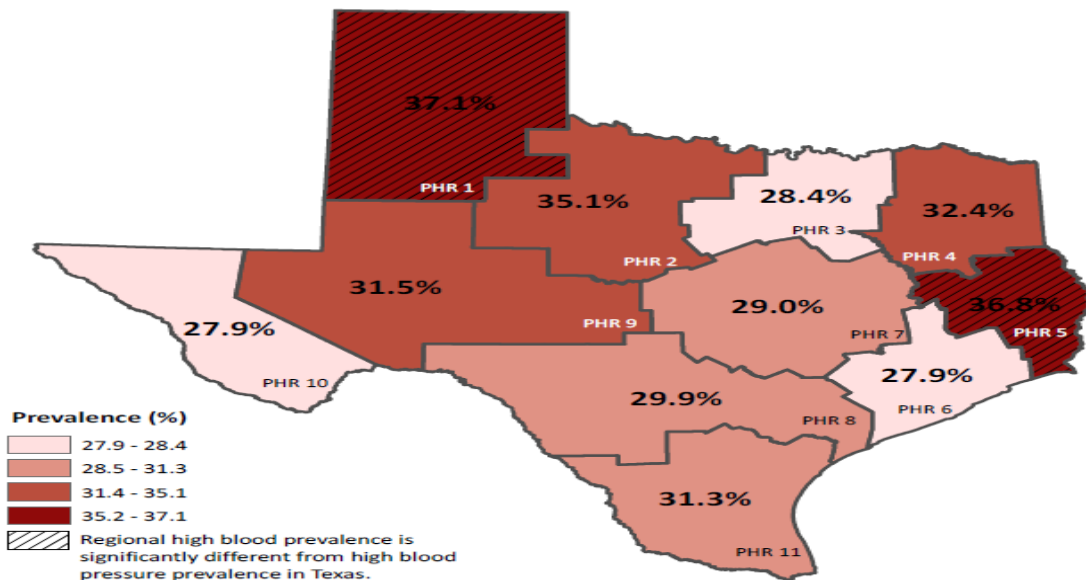
Percentage of potentially excess deaths* among persons aged <80 years for five leading causes of death in nonmetropolitan and metropolitan areas,† by year and public health region§ — National Vital Statistics System, United States, 2014



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High Blood Pressure Prevalence Among Adults By Public Health Region (PHR), Texas, 2015



The overall high blood pressure prevalence in Texas is 29.5% (95% CI: 28.2-30.8).

Data Classification: Quantiles
Data Source: 2015 Texas Behavioral Risk Factor Surveillance System,
Center for Health Statistics, Texas Department of State Health Services
High blood pressure is defined as a "Yes" response to the
question "Have you ever been told by a doctor, nurse or
other health professional that you have high blood pressure?"
Definition does not include borderline high blood pressure,
pre-hypertension, or high blood pressure only during pregnancy

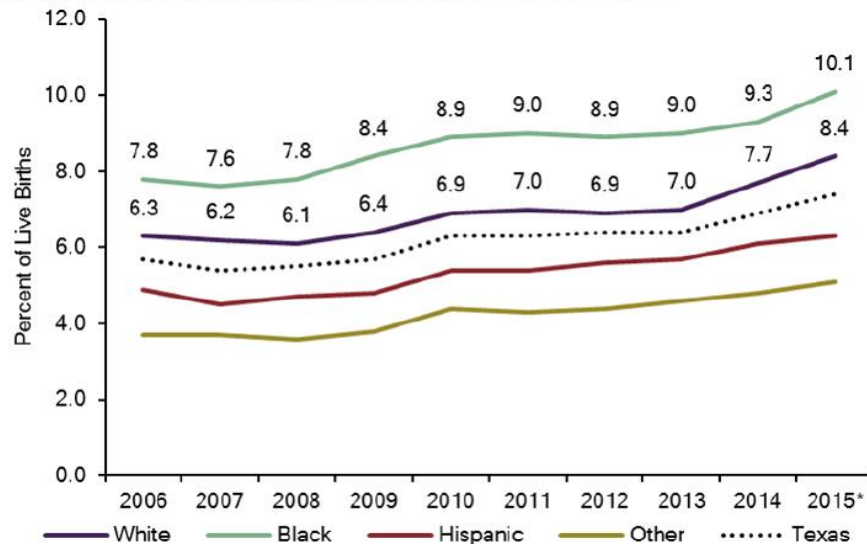
OSER
Office of Surveillance, Evaluation, and Research

TEXAS
Department of
State Health Services

Created by Sylvie Dodell 11/01/2016

Maternal Hypertension

Rates of Maternal Hypertension by Race/Ethnicity, 2006-2015



*2015 Texas data are preliminary

Source: 2006-2015 Birth Files

Prepared by: Office of Program Decision Support

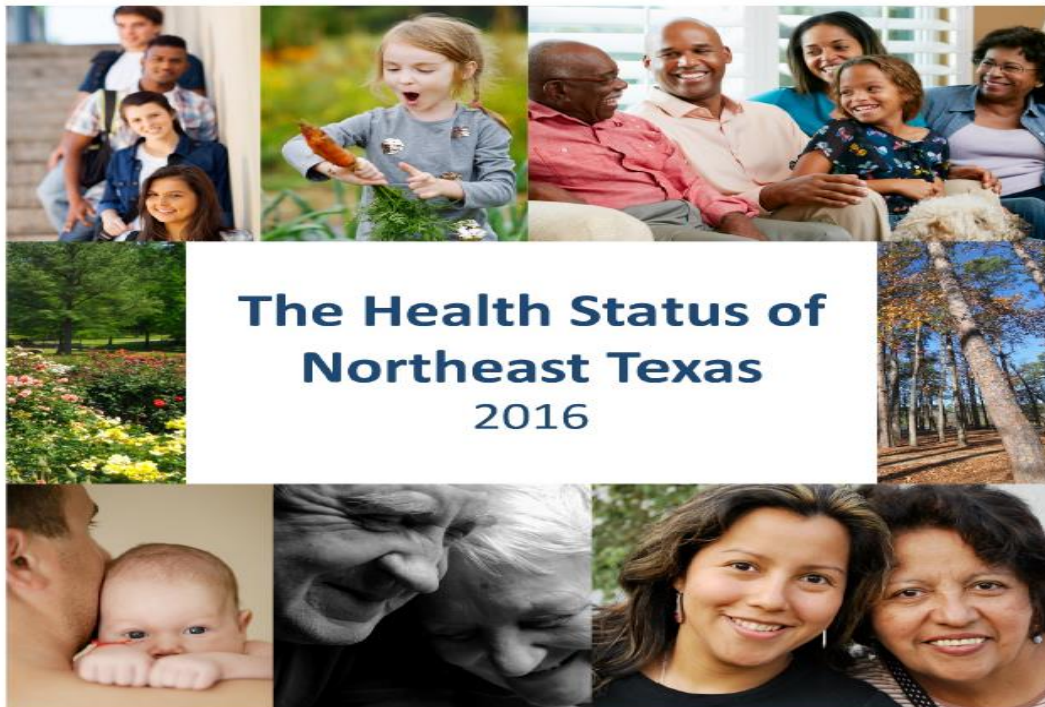
Oct 2016



THE UNIVERSITY of TEXAS SYSTEM
FOURTEEN INSTITUTIONS. UNLIMITED POSSIBILITIES.



The University of Texas
Health Science Center at Tyler
UT HEALTH
NORTHEAST



The Health Status of Northeast Texas 2016

UT HEALTH
NORTHEAST



The University of Texas
Health Science Center at Tyler



UT HEALTH NORTHEAST

Northeast Texas as “the 51st state”

Top 5 Causes of Death	TX State Rank*	Northeast TX “State” Rank*
Heart disease	33 rd	49 th
Cancer	13 th	25 th
Chronic lower respiratory diseases	21 st	47 th
Stroke	38 th	51 st
Unintentional injuries	9 th	34 th
All causes	31 st	45 th

*A rank of 1=best (lowest) rate, 51=worst (highest) rate, based on age-adjusted mortality rates for top 5 causes of death. *Adapted from:* Nehme E, et al. The health status of Northeast Texas 2016, a report from Dr. David L. Lakey, UT System CMO and Assoc. Vice Chancellor of Population Health, Table 3, p. 11. DSHS HSR Region 4/5N, 35 counties, 1.5 million inhabitants.

East Texas Community Health Survey

- 29.9% of those surveyed were diagnosed with high blood pressure
- 35.5% of respondents reported high blood pressure as a health priority

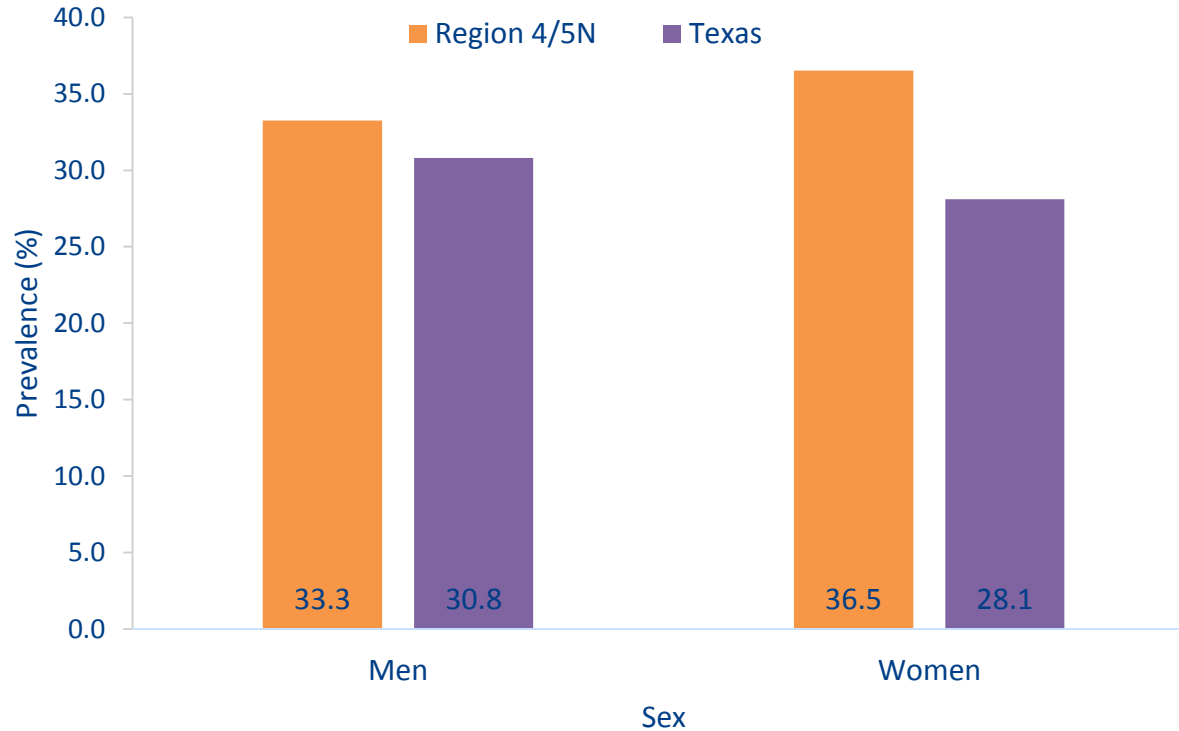
Hypertension Prevalence by Sex, Adults, HSR 4/5N & Texas, 2015



TEXAS

Health and Human Services

Texas Department of State
Health Services

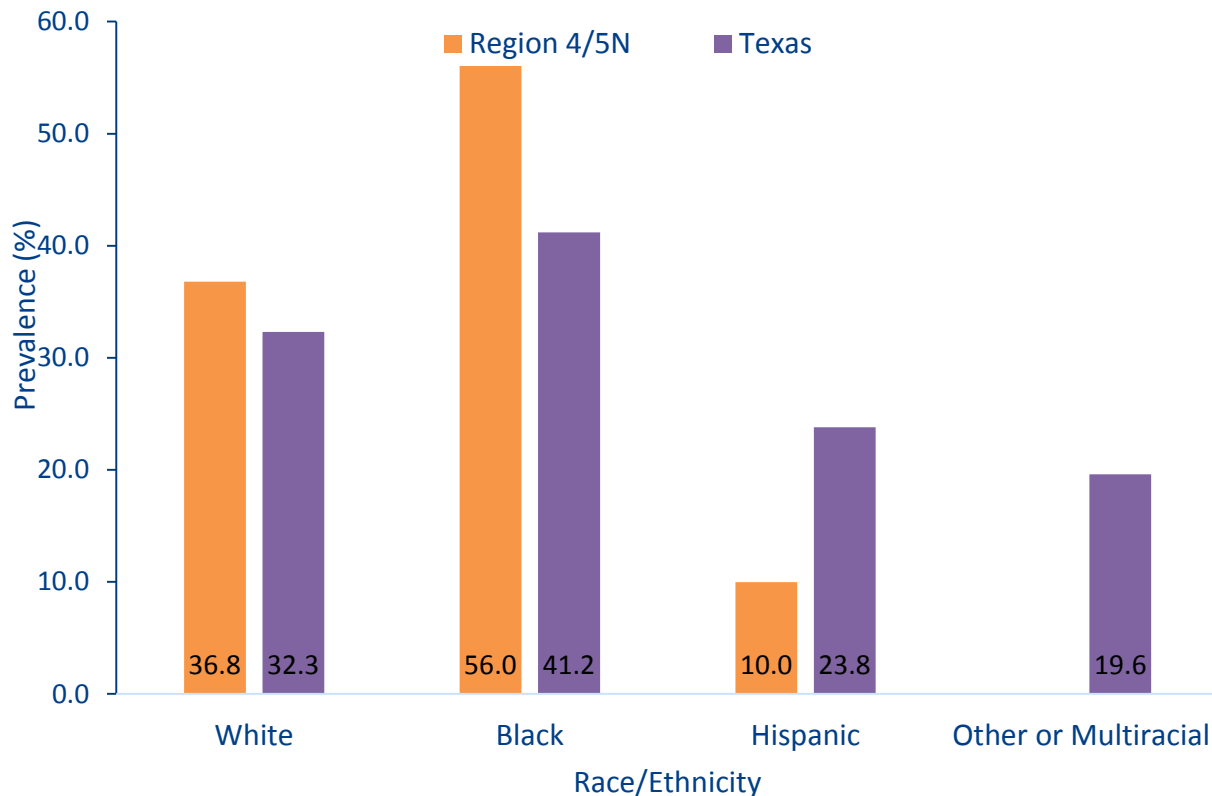


Hypertension Prevalence by Race, Adults, HSR 4/5N & Texas, 2015



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Health and Human Services

Texas Department of State
Health Services



9/20/2017

Source: Texas Behavioral Risk Factor Surveillance System (BRFSS) 2015, CHS, DSHS

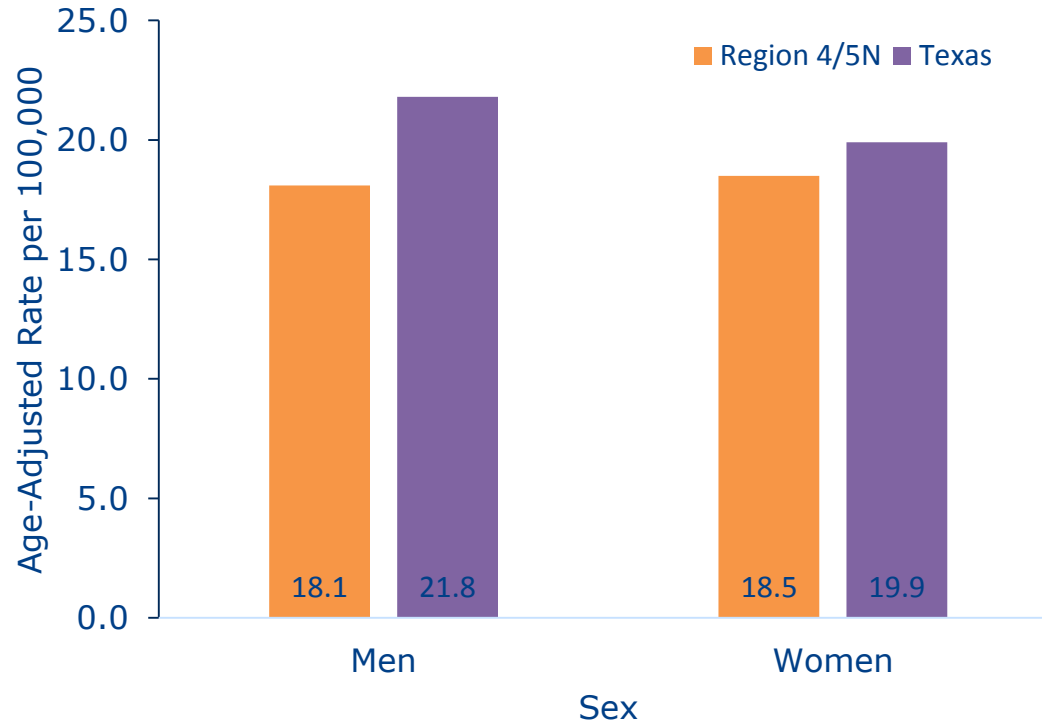
Hypertension Death Rate by Sex, HSR 4/5N & Texas, 2011-2015



TEXAS

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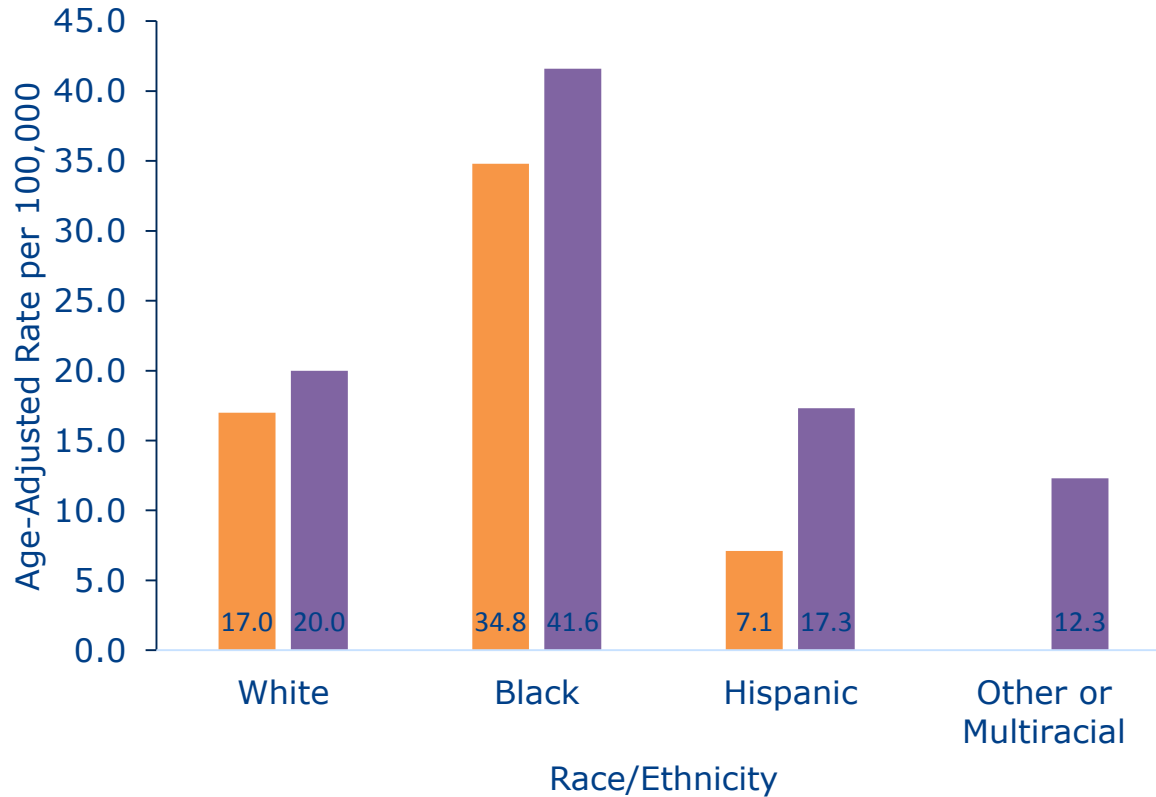
Hypertension Death Rate by Race, HSR 4/5N & Texas, 2011-2015



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Rural Disparity

- 46 million Americans — 15 percent of the U.S. population — currently live in rural areas.
- The percentages of deaths that were potentially preventable were higher in rural areas than in urban areas.

Factors Placing Rural Residents at Higher Risk

- Tend to be older and sicker than their urban counterparts.
- Have higher rates of cigarette smoking, high blood pressure, and obesity.
- Report less leisure-time physical activity and lower seatbelt use than their urban counterparts.
- Have higher rates of poverty, less access to healthcare, and are less likely to have health insurance.

Healthcare Providers in Rural Areas Can:

- **Screen patients for high blood pressure and make control a quality improvement goal.** High blood pressure is a leading risk factor for heart disease and stroke.
- **Encourage physical activity and healthy eating** to reduce obesity. Obesity has been linked to a variety of serious chronic illnesses, including diabetes, heart disease, cancer, and arthritis.
- **Promote smoking cessation.** Cigarette smoking is the leading cause of preventable disease and death in the United States and is the most significant risk factor for chronic lower respiratory disease.

How Does Smoking Impact BP?

- The nicotine in cigarette **smoke** is a big part of the problem.
- It raises your **blood pressure** and heart rate, narrows your arteries and hardens their walls, and makes your **blood** more likely to clot.
- It stresses your heart and sets you up for a heart attack or stroke.

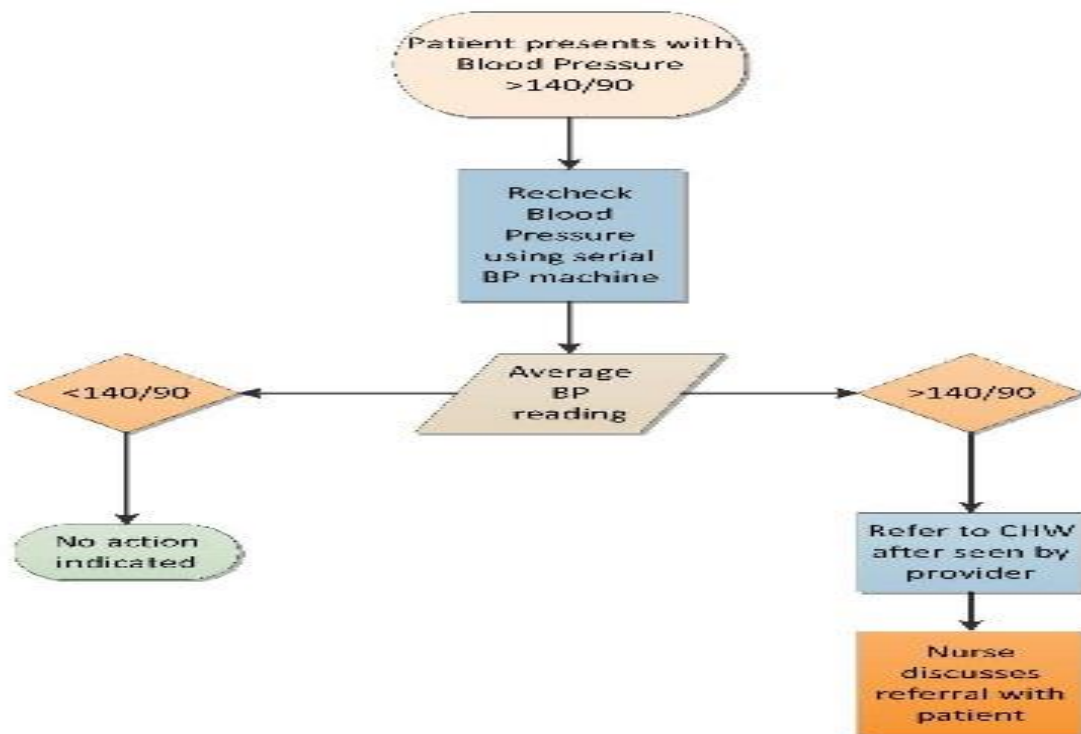
3. Describe a Community-based Intervention



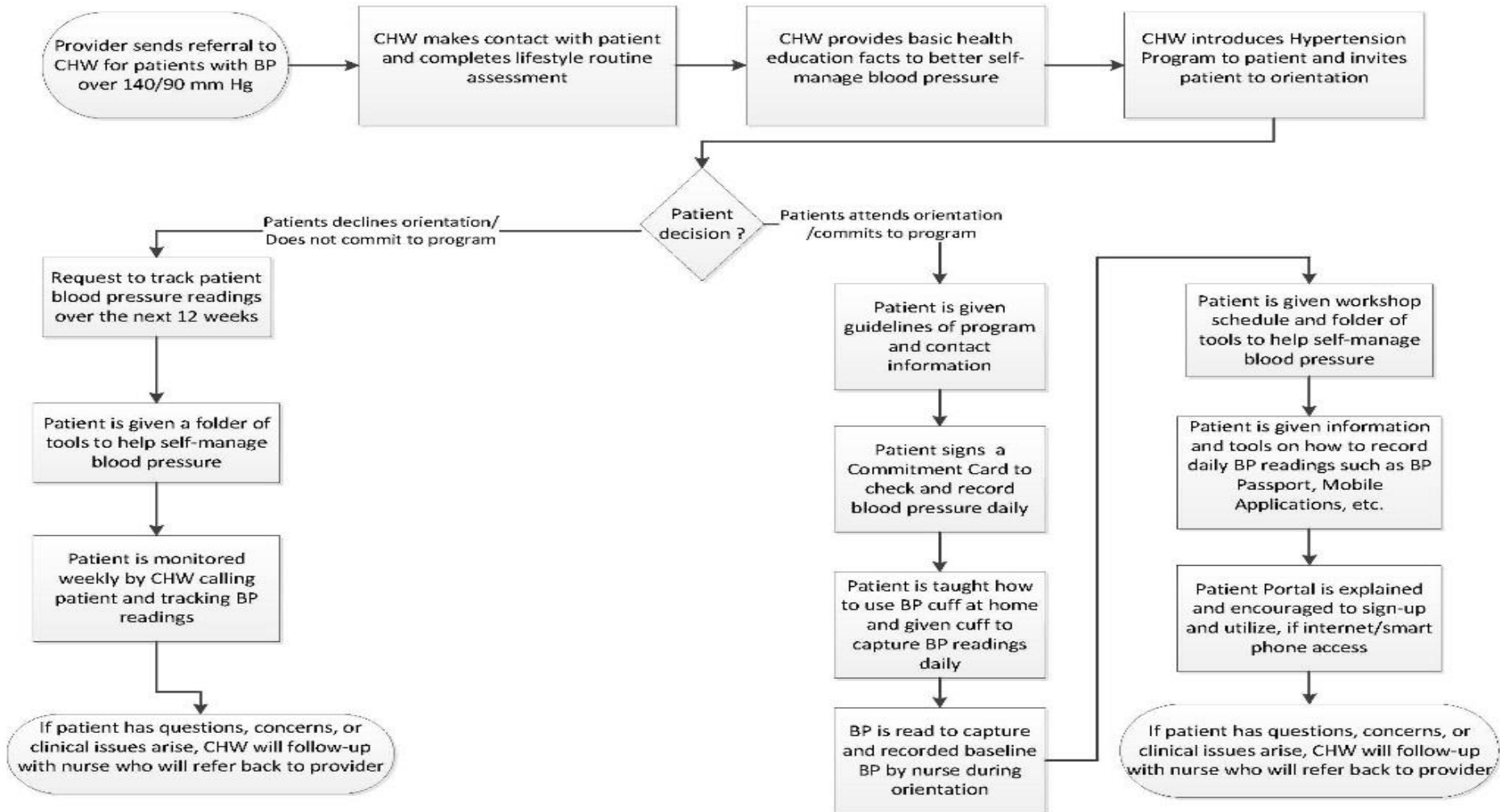
UT Health Northeast Hypertension Program

- Designed to assist patient with blood pressure self-monitoring and tracking
- Patients receive an automated blood pressure cuff
- Patients attend six workshops over a 12 week period
- Funded by the Texas Department of State Health Services

Hypertension Process Flow Map



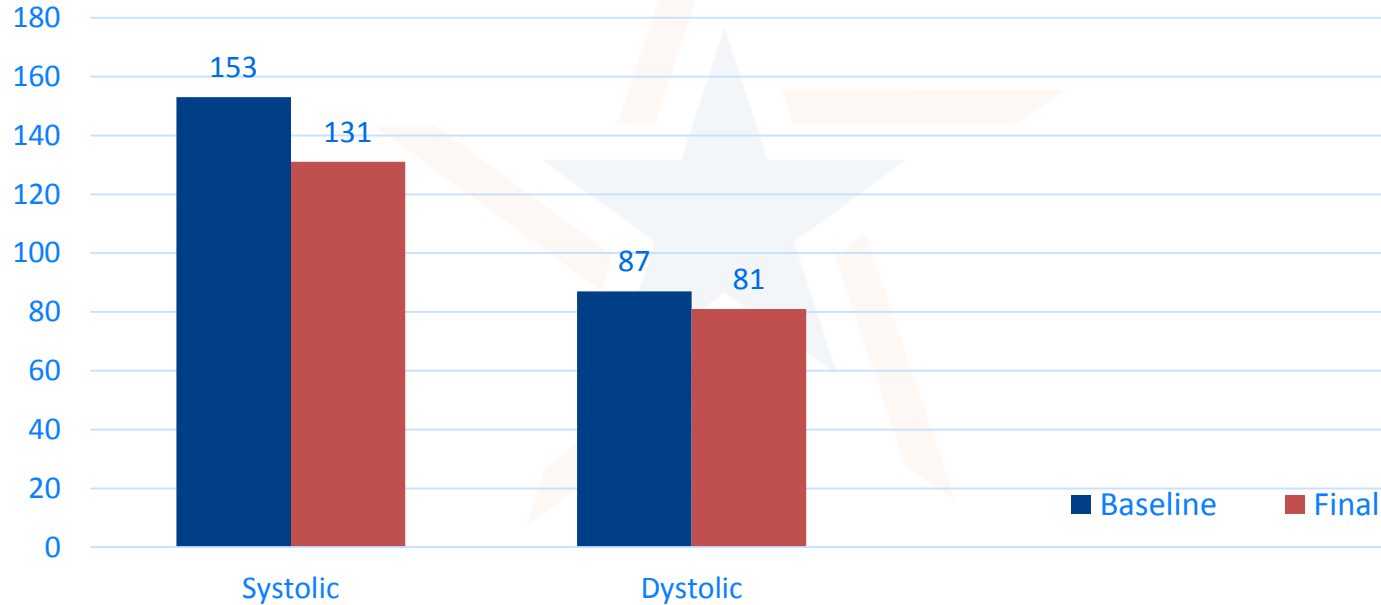
Hypertension Program Flowchart



Results

- 41 patients enrolled in the program
- 38 patients completed 12 weeks of self-blood pressure monitoring

Blood Pressure Readings



Overall Conclusions

- Rural residents have higher rates of hypertension
- Hypertension prevalence is high in East Texas, especially among African American males, warranting targeted efforts
- Community-based training with CHWs coupled with the provision of BP cuffs appears to be effective in reducing hypertension rates